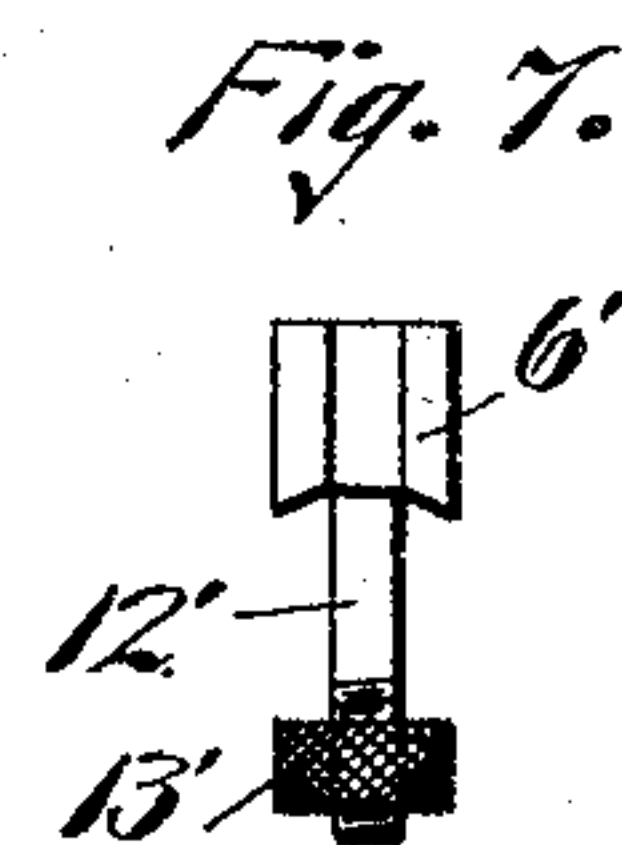
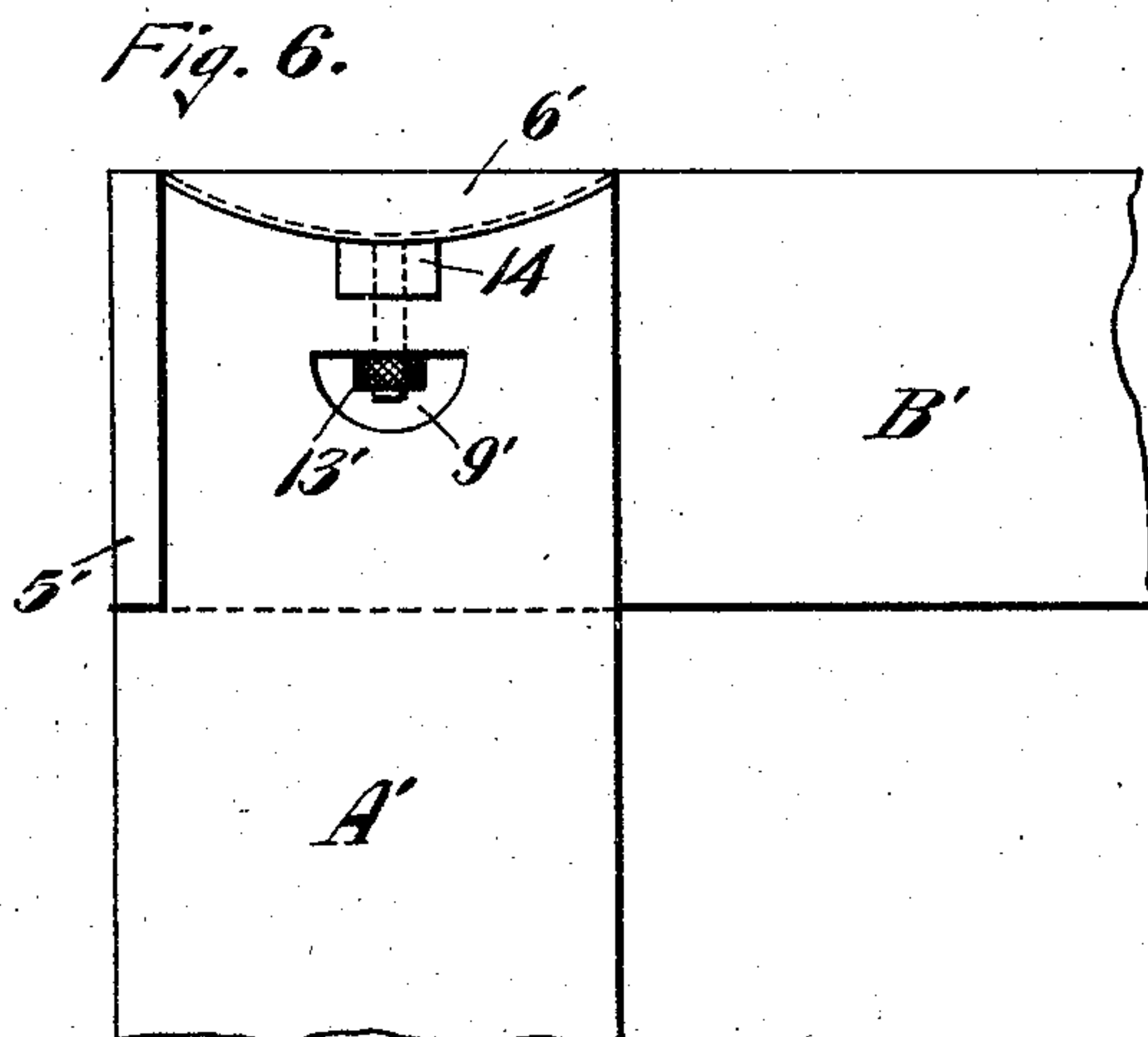
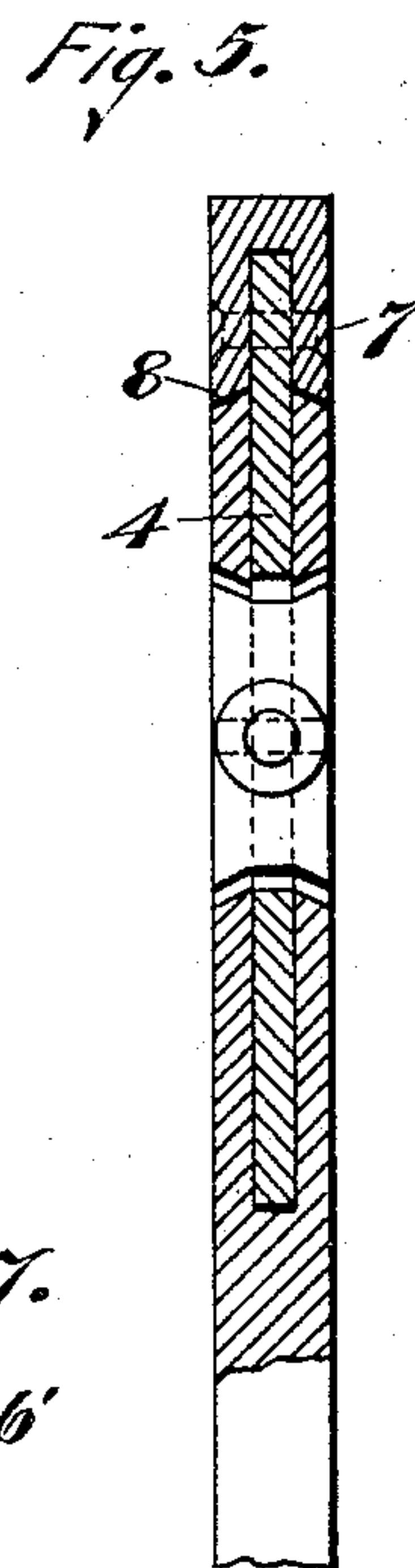
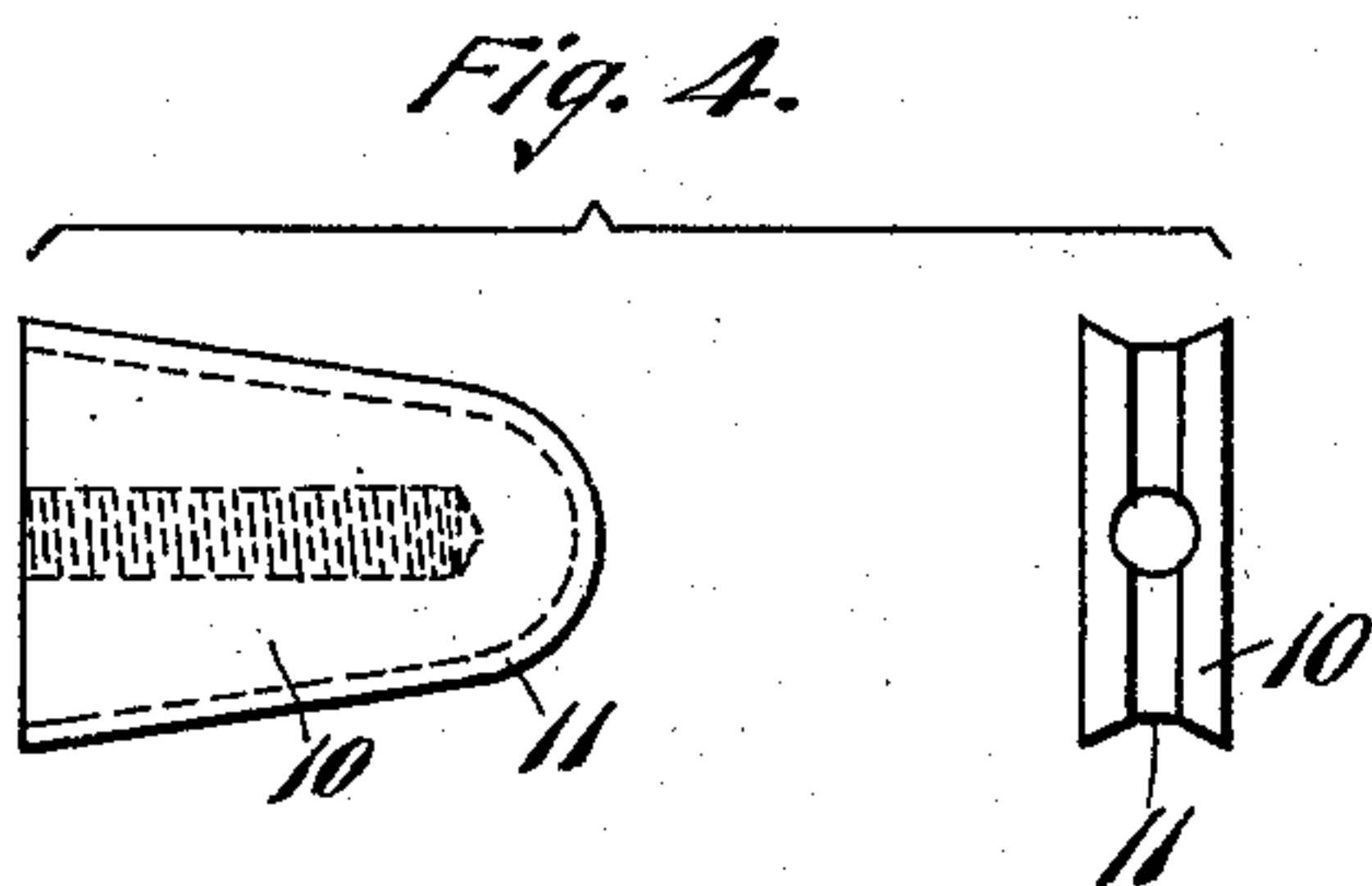
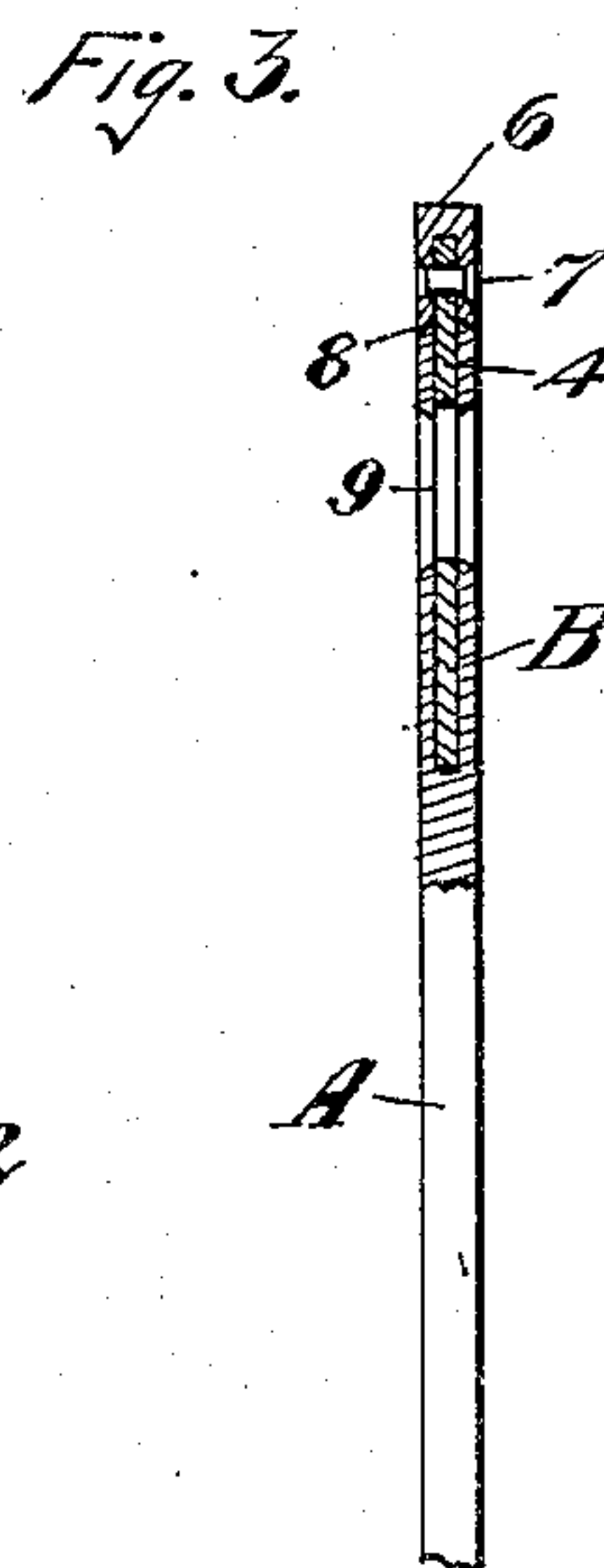
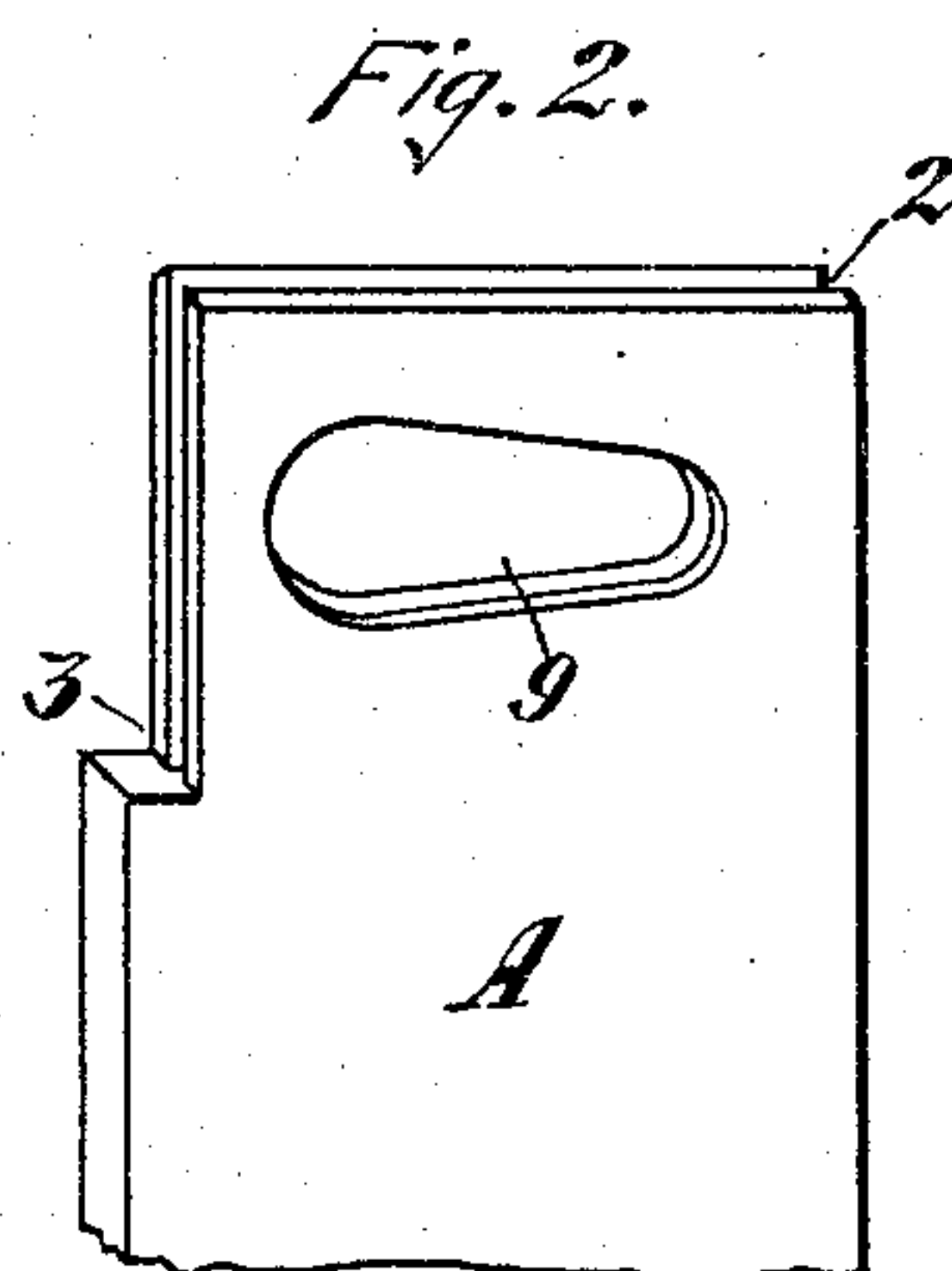
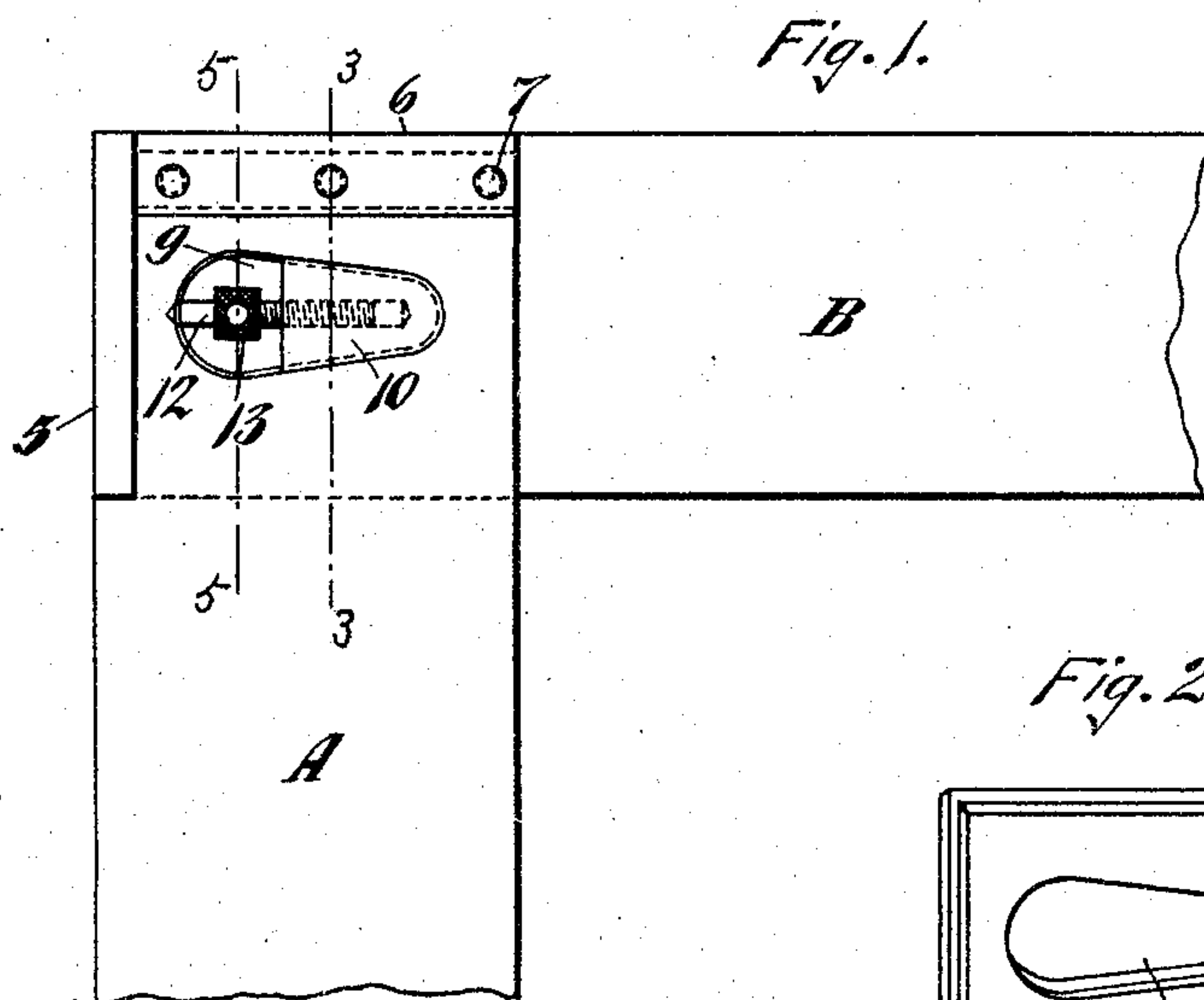


No. 790,027.

PATENTED MAY 16, 1905.

L. BRODT.
SEPARABLE SQUARE.
APPLICATION FILED OCT. 26, 1904.



WITNESSES,
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UNITED STATES PATENT OFFICE.

LINCOLN BRODT, OF BERKELEY, CALIFORNIA.

SEPARABLE SQUARE.

SPECIFICATION forming part of Letters Patent No. 790,027, dated May 16, 1905.

Application filed October 26, 1904. Serial No. 230,121.

To all whom it may concern:

Be it known that I, LINCOLN BRODT, a citizen of the United States, residing at Berkeley, in the county of Alameda and State of California, have invented new and useful Improvements in Separable Squares, of which the following is a specification.

My invention relates to an improved carpenter's square.

The object of my invention is to provide a square which shall have its branches separable one from the other to allow it to be packed or carried in a small compass and which shall be simple in construction and thoroughly practical in operation.

It consists of the parts and the construction and combination of parts hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a plan view of my improved square with ends broken away. Fig. 2 is a detail of one of the square members. Fig. 3 is a section on line 3 3 of Fig. 1 omitting wedge. Fig. 4 shows details of wedge. Fig. 5 is a section on line 5 5 of Fig. 1, but on graduated scale. Fig. 6 shows a modification of the invention. Fig. 7 is an end view of the locking member of Fig. 6.

As commonly constructed, carpenters' squares are made in one piece, rendering them awkward to carry in a small kit and always leaving an end sticking out to get damaged. I purpose making a square in two sections, with suitable interlocking means, which will enable the sections to be quickly set up into an absolutely rigid structure and which will allow the same to be taken apart and to occupy no more space really than that occupied by the longer member of an ordinary square.

A and B represent the two members of my improved square, which correspond, respectively, to the longer and shorter members of the ordinary square. The member A is grooved centrally at one end, as shown at 2 in Fig. 2, and the outside upper edge is cut out, as at 3. In manufacture the member B is planed down adjacent to one end to afford a thin interlocking member or tongue 4, adapted to fit snug into the groove or slot 2 of member A and leaving the integral thickened portion 5 to fit

the cut-out portion 3 of member A and forming a lateral abutment to support the slotted part of member A. The tongue portion 4 of member B is reinforced across its top between the upper end of the part 5 and the body of member B by means of a block 6, grooved out to fit over the upper edge of the tongue and riveted thereto, as indicated at 7. The under edges of the part 6 and the upper edges of the member A are correspondingly beveled, as indicated at 8, Figs. 3 and 5, and the part 6 forms an end abutment and support for the grooved member A. These interlocking ends of members A and B are made with the greatest precision, so that when the two are assembled they will stand at right angles to each other and will have such a snug and exact fit that there will be no wobble whatever of one member relative to the other.

While the reinforcing portion 6 might be secured to or formed on the member B by means other than that herein described and shown, the method mentioned is followed by reason of certain economical considerations in manufacture and the likelihood of obtaining perfect straight edges and true joints thereby.

It is understood that when the parts are assembled the outer surfaces of the bifurcated part of member A, the reinforce 6, and the parts of member B on either side of this bifurcated portion will all lie in corresponding planes, so as to offer perfectly flush joints on each side of the square.

The end of member A being supported along its upper edge and on two sides by parts integral or rigid with member B, there is absolutely no chance for any pivotal movement of one member relative to the other once the member A has been slid into interlocking position with member B, so that the first requirement, that the tool be maintained absolutely square, is attained.

Any suitable means may be employed to lock the members rigidly together, so that the tool can be subjected to the usual rough usage without coming apart or being damaged. As shown in Fig. 1, the two members are provided with a coincident wedge-shaped aperture 9, and the upper and lower edges of this aperture are beveled or convexed, as

shown in Figs. 2, 3, 5. A wedge or tapered block 10, having concaved upper and lower edges 11, corresponding to the convexities of the walls of aperture 9, is adapted to be readily slipped into this aperture at its wider portion and then to be moved forward in the plane of the two interlocked members and jammed by suitable means into the narrow space of the aperture to lock the two members together. A small screw 12, carrying a thumb-nut portion 13, is threaded in the wider end of the wedge 10 and seats in a socket formed in the rear wider end of aperture 9. By turning the screw 12 either by the fingers or by inserting a suitable instrument in the perforation in the thumb-nut the wedge can be driven forward to lock the members into an absolutely rigid structure that can be thrown around or handled with no more care than is accorded the ordinary one-piece square. By slacking up the screw 12 the wedge can be quickly taken out, allowing the two members to be quickly separated. By beveling or convexing the upper edge of the member A to fit in underneath the corresponding overhanging beveled parts of the reinforce 6 the upper thin edges of the member A are protected. Likewise by convexing the walls of the aperture 9 the same are protected by the wedge, and at the same time suitable guide-ways are formed for the latter. Since the wedge and its screw and thumb-nut are entirely contained within the aperture when the square is assembled and lies entirely between the two surfaces of the square, there are no projecting parts to interfere with the proper manipulation of the tool as a square.

In Fig. 6 is shown a modification in which a somewhat different form of locking means is employed. In this instance the members A' B' are respectively grooved and tongued, just as in the first instance, leaving the thickened abutment 5' integral with member B' to afford a lateral guide and support to member A'. The upper edges of the two members between the end of part 5' and the body of member B' are concaved in the direction of length of member B' and slightly convex transverse to the plane of the two members and adapted to receive a segmental cross-head 6', provided with the stud 12', which fits a perforation in a part 14 integral with member B' and of a thickness corresponding thereto. The bifurcated portions of member A are cut out to fit around and abut against this thicker part 14 of member B'. Just below this part 14, which affords a suitable bearing for the stud 12', is an aperture 9', extending through both members and into which aperture the stud 12' is adapted to project to receive a suitable thumb-nut 13', by which the two members may be drawn and locked together. The part 6' serves the double purpose of a protector and abut-

ment for the bifurcated end of member A' and has an interlocking means. The outer edge of the part 6' is in continuation with the straight-edge portion of the part B', so that a perfect right angle may be described around the outside of the square.

It is obvious that various modifications in my invention are possible without departing from the principle thereof, and I do not wish to be understood as limiting myself to the specific construction as herein shown and described.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A square comprising separable members one of which is grooved at one end in the plane of the member, the other member having a corresponding tongue to fit said groove, said tongue having end and lateral abutments to support the sides and end of the grooved member, and means to lock the two members together.

2. A square comprising separable members one of which is centrally grooved at one end and the other has a corresponding tongue, the tongue having a transverse thickened portion at its end projecting beyond the groove to afford an abutment to support the side of the grooved portion of the first member, said tongue having abutments for the end of the grooved member and means to lock the members together.

3. A square comprising separable members, one having a groove and the other a corresponding tongue to fit the groove, one of said members having side and end abutments against which the other member seats, and means to lock the members together including a removable wedge fitting an aperture in the two members.

4. A square comprising respective tongued and grooved interlocking separable members, the tongued member provided with lateral and end abutments for the grooved member, said members apertured to receive a locking-block.

5. A square comprising two separable members, one of which is grooved and the other provided with a corresponding tongue having side and end abutments, said members having a coincident wedge-shaped aperture, a wedge removably fitting said aperture and means for operating the wedge to lock the grooved member in contact with the abutments of the tongue member.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LINCOLN BRODT.

Witnesses:

C. G. BIRD,

W. N. MACINTIRE.